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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,373	10/29/2001	Hiroshi Sasaki	01697/LH	1645

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EXAMINER

FINEMAN, LEE A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 12/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,373

Applicant(s)

SASAKI ET AL.

Examiner

Le Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities:

When using an acronym at the first occurrence (i.e. AOTF, page 4, line 11), the meaning should be expressly stated. Appropriate correction is required.

3. The abstract of the disclosure is objected to because when using an acronym at the first occurrence (i.e. AOTF, line 8), the meaning should be expressly stated. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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5. Claims 1, 4-7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Schoeppe et al., U.S. Patent No. 6,167,173.

Schoeppe et al. discloses a laser microscope (fig. 1), which irradiates a sample (5) with a laser light (13.2) constituted of a plurality of emission wavelengths (column 3, lines 15-22) through an objective lens (4), and detecting a fluorescent light from the sample (column 3, lines 49-57), said laser microscope comprising: a spectral resolution section (21) configured to spectrally resolve said laser light; a light receiving element array configured to receive the laser lights spectrally resolved by the spectral resolution section (19); a controller (36, 34) configured to receive an output signal of the light receiving element array and controlling said laser light for each of said emission wavelengths (column 4, lines 1-7) and wherein said controller receives the output signal of said light receiving element array and simultaneously controls respective light intensities of the plurality of emission wavelengths of said laser light to be constant and wherein said controller configured to receive the output signal of said light receiving element array and outputting a control signal for simultaneously setting respective light intensities of the plurality of emission wavelengths of said laser light to be constant (column 4, lines 1-19); an acousto-optical element (AOTF within 13.2), disposed on an optical path of said laser light, configured to receive said control signal outputted from said control unit and setting the respective light intensities of the plurality of emission wavelengths of said laser light to be constant and an optical fiber (14.2) for guiding said laser light into a laser microscope main body wherein said spectral resolution section and said light receiving element array are disposed on a light emission side of said optical fiber (fig. 1); a collimator lens (16) configured to collimate

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said laser light guided by the optical fiber; and a beam splitter (18) configured to split a part of said laser light and guiding the part into said spectral resolution section.

6. Claims 1-2 and 4-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Birk et al., U.S. Patent Application Publication No. US 2002/0050564 A1.

Regarding claims 1 and 4-6, Birk et al. discloses a laser microscope (fig. 1), which irradiates a sample (14) with a laser light (8) constituted of a plurality of emission wavelengths (page 2, section [00019], lines 12-13) through an objective lens (13), and detecting a fluorescent light from the sample (in so far as one could pick wavelengths which will make the sample fluoresce, see page 1, section [0004]), said laser microscope comprising: a spectral resolution section (7) configured to spectrally resolve said laser light; a light receiving element array configured to receive the laser lights spectrally resolved by the spectral resolution section (18); a controller (20) configured to receive an output signal of the light receiving element array and controlling said laser light for each of said emission wavelengths and wherein said controller receives the output signal of said light receiving element array and simultaneously controls respective light intensities of the plurality of emission wavelengths of said laser light to be constant (page 2, section [00020], lines 11-13); and an optical fiber (4) for guiding said laser light into a laser microscope main body wherein said spectral resolution section and said light receiving element array are disposed on a light emission side of said optical fiber (fig. 1).

Regarding claim 2, Birk et al. further discloses wherein said spectral resolution section is any one selected from a group including of a prism, a diffraction grating, and a beam splitter (page 2, section [00019], lines 25-30).

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Regarding claim 7, Birk et al. further discloses wherein said controller comprises: a control unit (20) configured to receive the output signal of said light receiving element array and outputting a control signal for simultaneously setting respective light intensities of the plurality of emission wavelengths of said laser light to be constant (page 2, section [00020], lines 11-16); and an acousto-optical element (page 2, section [00020], lines 16-20), disposed on an optical path of said laser light, configured to receive said control signal outputted from said control unit and setting the respective light intensities of the plurality of emission wavelengths of said laser light to be constant (page 2, section [00020], lines 11-20).

Regarding claim 8, Birk et al. further discloses wherein a converging lens (9) is disposed between said spectral resolution section and said light receiving element array and configured to converge the spectrally resolved laser lights on said light receiving element array for the respective emission wavelengths.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3, 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoeppe et al. in view of Yanagawa, U.S. Patent No. 5,287,367.

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Schoeppe discloses the claimed invention except for wherein said spectral resolution section is any one selected from a group including of a prism, a diffraction grating, and a beam splitter; wherein said light receiving element array comprises either one of a split photodiode and a solid-state image sensing device; wherein a converging lens is disposed between said spectral resolution section and said light receiving element array and configured to converge the spectrally resolved laser lights on said light receiving element array for the respective emission wavelengths; and wherein said collimator lens, said beam splitter, said spectral resolution section, said converging lens, and said light receiving element array are formed into one block, and the block is constituted to be attachable/detachable with respect to a main body of said laser microscope. Yanagawa teaches a laser with a wavelength detection/comparison unit (43, figs. 4-9) with a spectral resolution section (431 or 432) is any one selected from a group including of a prism, a diffraction grating, and a beam splitter; and a light receiving element array (431b or 433a and 433b or 432b) wherein the light receiving element array comprises a split photodiode; wherein a converging lens (432a, fig. 8) is disposed between said spectral resolution section and said light receiving element array and configured to converge the spectrally resolved laser lights on said light receiving element array for the respective emission wavelengths. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the wavelength detection/comparison unit of Yanagawa in the system of Schoeppe et al. to be able to enter a specific wavelength(s) value (S_5 , Schoeppe et al.) to which the system can be controlled. Further, the collimator lens (16) and beam splitter (18) of Schoeppe et al. with the spectral resolution section, the converging lens, and the light receiving element array of Yanagawa are

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formed into one block (within the scanning unit of the microscope), and therefore the block is constituted to be attachable/detachable with respect to a main body (M) of the laser microscope.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (703) 305-5414. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

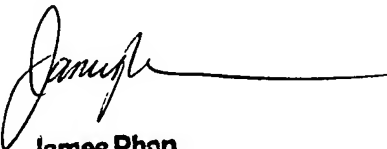
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

LAF

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December 24, 2002


James Phan
Primary Examiner